10 acres of excellent well drained land, admirably adapted alike for the cultivation of fruit and vegetables. It is irregular in form, a lengthened parallelogram extending from west to east; its angles are indented, and on each of the lengthened sides there are two obtruding equi-distant semicircles of 50 feet radius, and each is at right angles with its opposite figure, the whole being surrounded with lofty brick walls, which enclose an area of a little over 7 acres. The south and eastern sides of these walls are faced with upwards of 3 more acres, which are also inclosed by an outer wall; but neither of these external walls are available for any gardening operations, in consequence of being open to the park on one hand and the pleasure ground on the other. The surface of the ground is uneven, falling considerably towards the middle, alike from the eastern and western ends, and the middle portion also inclines somewhat from the north to the southern side. A straight walk of good width is carried round the whole of the interior, at a suitable distance from the walls. A noble walk some 13 or 14 feet in width divides the garden into two equal portions during its entire length. In the centre of this walk there is a circle of turf 60 feet in diameter. On the same line of walk there are two ponds, each 40 feet in diameter, and each is situated 250 feet from the centre of the Grass circle in the middle. These ponds are supplied from the drainings of the garden, deep cuttings having been formed not only under every walk but also round the whole of the garden walls. These ponds are belted with turf to the same diameter as the central circle. The garden is intersected by three cross walks, these three circles forming their centres; the walks, which are centered by the ponds, being terminated at either end by the semicircles which jut out beyond the straight line of the garden walls. The centre cross walk extends through the whole length of the slip on the south side a distance of 440 feet. There is also another pond at the southern side, which receives all the drainage from below the other ponds. The whole of these cross walks and the grand middle walk are belted with turf on either side to a width of some 10 or more feet, on which beds of simple form, and in opposite pairs, are inserted at close intervals during the entire length; and the same style is applied to the margin of the ponds and centre circle. The whole is backed on either hand by a mixed row of Hollyhocks, Dahlias, and Roses, which in some measure secures the vegetable crops from observation. For the supply of these beds 20,000 plants of the choicest and best kinds are annually required, and they were skilfully arranged both in regard to colour and contrast. When first seen from the palladian entrance on the western side, the vista of the centre walk, extending to more than 1100 feet, and broken by the central circles in the lower part, charms us by not only its vast extent, but also by the unrivalled and gorgeous character of its floral beauty. The walk through the lower slope is laid out with letters executed in Box, and they too were gay with flowering plants.

The forcing structures are on the south side of the northern walk, and are faced by the eastern pond in the grand centre walk. They consist of two Melon pits, each 36 feet long by 7 feet wide; two Cucumber pits, each 40 feet long by 8 feet wide; two Pine pits, each 40 feet long by 12 feet wide; two early Vineries, each 34 feet long by 12 feet wide; two late Vineries, each 30 feet long by 12 feet wide; a Peach house, 60 feet long by 12 feet wide; a Mushroom house, 26 feet long by 9 feet wide. There is also on the eastern aspect of the western wall a Fig house 72 feet long by 14 feet wide; and the whole of these structures are efficiently heated by hot water circulating in pipes. And at the period of our visit they still contained some excellent fruit, amongst which might be particularised very good examples of scarlet-fleshed Melon, also Figs and a considerable quantity of late Grapes still ungathered. These latter were planted inside, and over the beds of the house a thick covering of dry leaves was placed; there were also some excellent Pines in various stages of growth. The walls were well covered with nicely trained fruit trees, and Cherries, Apricots, and Pears seemed to be entirely free alike from gum and canker. The lower side of the southern quarters on the outside slip is planted with standard Apple trees in capital condition, and they usually produce heavy crops of fine fruit. The quarters of the garden were well cropped and producing vegetables of no ordinary character, the whole reflecting much credit on Mr. Turnbull, whose horticultural merits have long been fully established. *D.*

## REPORT ON THE VARIETIES OF LETTUCE.

THE Lettuces may be divided into two classes; those which are upright, oblong, or obovate in growth, and those which are spreading, round, or flat-headed. The former are known as Cos Lettuces, the latter as Cabbage Lettuces. Of these, the following sorts were grown in the Society's Garden in the summer of 1859.

### Class I.—COS LETTUCES.

*White Paris Cos*, Glendinning. — Syn.: Carter's Giant White Cos, Carter & Co.; Superb White Cos, Sutton & Sons; Improved White Paris Cos, Minier & Co. Very large; leaves light green, obovate, hooded at the top, so that it naturally closes and blanches without tying, becoming white, tender, crisp, and excellent. Seeds white. It attains a larger size than the common White Cos sown at the same time, and in consequence will grow for a longer period before it commences running to seed. Plants raised from seeds saved in this country should be watched in order to see that the leaves are rounded and concave at the top; for when they become pointed and not inclined to hood or turn inwards, they must be considered as having degenerated from the true character of this excellent sort. This is generally esteemed the best of all summer Cos Lettuces.

*New Imperial White Cos*, May (Hammersmith).—This very much resembles the White Paris Cos in appearance and quality; but it differs from the latter in having much longer seeds.

*Crystal Cos*, Josling.—This very much resembles the White Paris Cos, except that it runs earlier to seed.

*Paris Green Cos*, Vilmorin.—Syn.: Superb Green Cos, Sutton & Sons; Improved Paris Green Cos, Minier & Co.; Paris Cos, Lee. This very much resembles the White Paris Cos, except that the leaves are of a darker green. It it also somewhat hardier, and therefore better adapted for sowing early in spring and in autumn. Some indeed prefer it to the White Paris Cos in summer.

*New Golden Cos*, Flanagan & Son.—This proved to be not so large as the Green Paris Cos, to which in other respects it is similar.

*Snow's Compact Cos*, Lee.—Syn.: Snow's Matchless Cos, Snow's Champion Cos, E. G. Henderson. Of very upright growth, with narrow, pointed, deep green leaves, forming very little heart for blanching; it was found to be, on the whole, so very inferior to the Green Paris Cos, that it was considered not worthy of cultivation.

*Acme of Perfection*, Kernan. — Habit spreading. Leaves large, broadly obovate, rather light green, of flabby texture; requires tying in order to blanch the heart leaves, which are then good, but want crispness. It has, however, the property of not running to seed so soon as most other sorts. Seeds white. It appears to be very similar to the White-seeded Alphange Cos, but the differences, if any, can only be determined on further trial, grown side by side.

*White-seeded Bath Cos*, Cutbush (Highgate).—This proved to be the same as the well-known White-seeded Brown Cos, the hardiest of this class of Lettuces, and well adapted for standing the winter. The outside leaves are brown, but the heart blanches white, with the exception of a slight pink tinge on the bases of the mid-ribs. It is crisp and excellent.

*Black-seeded Bath Cos*, Cutbush (Highgate); Josling.—The same as the preceding, except in the colour of the seeds.

*Griffin's Alma*, E. G. Henderson.—This was stated to be an improvement on the Bath Cos, to which it bears much resemblance. Seeds white. It appears to be a variety of that well-known kind, with a somewhat stronger habit of growth.

### Class II.—CABBAGE LETTUCES.

*Neapolitan Cabbage*, Lee, Veitch, Frazer, Richardson & Goad.—Dwarf habit. Leaves curled and serrated on the edges; head large, firm, blanching white, very crisp, and of excellent quality. Seeds white. It soon begins to form a heart, and does not run to seed readily. By many persons this is considered the best of the Summer Cabbage Lettuces.

*Marseilles Cabbage*, Minier & Co.—Dwarf. Leaves large, curled, and serrated, slightly tinged with brown, forming a loose, irregular head, tolerably crisp, but not by any means so good as the preceding. It is, however, longer in running to seed.

*Ne Plus Ultra*, Sutton & Sons.—Rather small, forming a flattish, round compact head. Leaves roundish, entire on the margins, slightly tinged with brown, of soft texture. Heart white, soft and tender. Seeds white. A good early Lettuce.

*Victoria Cabbage*, Minier & Co.; Lee.—About the size of the Hardy Hammersmith, and of very dwarf habit. Leaves light green, soon forming a heart, which is compact, white and tender. A very early sort. Seeds white.

*Drumhead*, Lee.—Leaves roundish, slightly curled, forming a large flattish head, not so compact as the Neapolitan, but white, tender, and very good. Seeds white. *Horticultural Society's Proceedings.*

## Home Correspondence.

*Cross-bred Plants.*—I hope that some of your readers will respond to Mr. Westwood's wish, and give any information which they may possess on the permanence of cross-bred plants and animals. Will Mr. Westwood be so good as to give a reference to any account of the variability of the Swedish Turnip? I did not even know that it was reputed to be a cross-bred production. I am aware that this is supposed to be the case with some Turnips; but I have searched in vain for any authentic history of their origin. No one, I believe, doubts that cross-bred productions tend to revert in various degrees to either parent for many generations; some say for a dozen, others for a score or even more generations. But cannot breeders adduce some cases of crossed breeds of sheep and pigs (such as the Shropshire or Oxford sheep, or Lord Harborough's pigs) which are now true? With respect to the Cottagers' Kale, I was so much surprised at the accounts of its trueness that I procured seed from the raisers; but in my soil the plants were far from presenting a uniform appearance. In addition to the tendency to reversion to either parent form, it is almost universally asserted that cross-bred productions are highly variable, and often display characters not observed in either parent. I do not wish to dispute this common belief, but I suspect it would puzzle any one to adduce satisfactory cases; and certainly Gärtner has advanced a mass of evidence on the opposite side. I am not at all surprised at Mr. Westwood demurring to the belief that occasionally crossing the strain is advantageous or necessary with productions in a state of nature. The subject is only just alluded to in my volume on the "Origin of Species." I do not pretend that I can prove the truth of the doctrine; but I feel sure that many important facts and arguments can be adduced in its favour. The ill effects of close inter-breeding between the nearest relations, especially if exposed to the same conditions of life, would be, I believe, the same under Nature as under domestication,—namely, some degree of sterility and weakness of constitution. Variability arises from quite independent causes, and is to a certain extent counteracted in its early stages by the free crossing of the individuals of the same species. Mr. Westwood misunderstands me if he supposes that it is my opinion that the Ibis, for instance, keeps true to its kind "by occasional crosses with individuals of the same species which have not sprung from the same grandfather or great-grandfather." I only believe that if individuals of the Ibis did vary, such crosses would tend to keep the species true; and further, if the young from a single pair increased so slowly that they all continued to inhabit the same small district, and if brothers and sisters often united during successive generations, then that the Ibis would rapidly deteriorate in fertility and constitution. Mr. Westwood advances the hive-bee, as probably a case of constant intercrossing. Andrew Knight, however, who specially attended to this point, has published his belief (whether founded on sufficient evidence I will not pretend to say) that the queen-bee commonly unites with a drone from another community. *Charles Darwin, Down, Bromley, Kent.*

*Housetop Horticulture in London.*—Why not? I have seen such as you speak of elsewhere. What has been may be again. What now exists may be added to and improved. I remember once visiting a friend and expressing admiration of a bouquet of flowers that stood on the table. The lady of the house told me that she had picked them that morning from her garden, and asked me to take a walk in it. I expressed myself tired, and promised to come another day, as I knew, or thought I knew by the situation of the house, which was closely packed amongst neighbours, that the garden must be at least half a mile distant; she laughed, and asked me to follow her. We reached the staircase window, she stopped, drew up the blind, pushed open the window and asked me to enter. It was no dream. There, on the roof of the tenement, was the garden prettily arranged, and by trellis-work made quite private. The plants, creepers, &c., were in boxes, the lead roof covered with sand; two sides of it were shut in by the walls of the house. It looked pretty, even luxuriant; there was no glass, as that article was then rather expensive. The second time I saw anything of the sort was on the top of a house in a town in Devonshire; there were no houses to shelter or screen the sun from it, but it was roofed or arched over by a trellis-work of wood painted green. I have often admired the Ivy growing over it, and thought I should like to have such a house myself. *Voyageur.*

*Flowers in our Public Parks.*—Although I do not think that every housetop in London can be easily converted into a garden, yet I am sure that many of the working classes have a wish to cultivate flowers, and would do so, were they taught in what manner they should raise those kinds suitable to the climate of this town. When we bewail the depravity of the lower classes, we forget how few are the enjoyments within their reach. It is not only worthy of the philanthropist but of the statesman to open to them new and innocent pleasures, which, while they lead them to forego pernicious luxuries, will make them better citizens. After a day of monotonous toil the working man feels keenly the relief that a change of pursuit gives. The body gains rest when the mind is amused. The back yard, where a few favourites bloom, would soon prove an antidote to the gaudy gin-palace with the unhealthy associations it conveys. In some of our parks a few common flowers have been introduced among the shrubs which decorate the beds planted by Sir B. Hall, and in the Regent's Park by Lord J. Manners. The experiment succeeded, and proves that were more care bestowed on their cultivation and better skill on their arrangement, not only would the taste for flowers be promoted, but a source of constant attraction provided for those who leave the crowded alley or the sultry workshop to breathe a purer air in what might be both a public park and a people's garden. To effect this, however, the estimates allowed for the maintenance of the parks must be increased. Superintendents must be employed at proper salaries, who have studied not only the peculiar effect of the climate of London on plants and shrubs, but have taste and knowledge in their arrangement; while working gardeners must be substituted for some of those Crimean heroes, who astonish nurserymaids by their beards. I do not pretend that it would be necessary to emulate some of the public gardens abroad, where the Orange tree and Pomegranate lend their sweetness to the evening air; I merely advocate a judicious disposition of common

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